

IN THE CLAIMS

The status of the claims as presently amended is as follows:

1. (*Currently Amended*) An image forming apparatus comprising:

a rotatively driven image carrier;
a primary transfer device that primarily transfers an image onto said image carrier;
a secondary transfer device that secondarily transfers the image on said image carrier
onto a recording medium; and

a controller,

wherein said controller issues a first issuing device that issues an image writing reference position signal for starting image formation based on a circumference that is a length, which is detected in advance of said image carrier in a direction of rotation thereof[(:)],

wherein said controller issues a second issuing device that issues the image writing reference position signal for starting image formation based on a detected reference position on the image carrier[(:)], and

wherein said controller a selection device that selectively switches between signal-issuing by said first issuing device and signal issuing by said second issuing device the first and second image writing reference position signals.

2. (*Currently Amended*) An image forming apparatus ~~according to claim 1,~~ comprising:

a rotatively driven image carrier;
a primary transfer device that primarily transfers an image onto said image carrier;
a secondary transfer device that secondarily transfers the image on said image carrier
onto a recording medium; and

a controller,

wherein said controller issues a first image writing reference position signal for starting image formation based on a circumference that is a length of said image carrier in a direction of rotation thereof,

wherein said controller issues a second image writing reference position signal for starting image formation based on a detected reference position on the image carrier, and

wherein said controller selectively switches between the first and second image writing reference position signals; and

a reference position detecting device that detects the reference position on said image carrier by detecting a marking attached to said image carrier, ~~and~~

wherein ~~said first issuing device is operable~~ when image formation is carried out for a plurality of colors, ~~to said controller~~ determines image writing timing for a first color and issues the first image writing reference position signal for the first color, and then determines the image writing timing for a next color after lapse of a time period corresponding to one rotation of said image carrier later and issues the first image writing reference position signal for the next color, and

wherein ~~said second issuing device is operable~~ when image formation is carried out for the plurality of colors, ~~to said controller~~ determines the image writing timing for the first color with reference to the reference position of said image carrier detected by said reference position detecting device and issues the second image writing reference position signal for the first color, and then determines the image writing timing for the next color with reference to the reference position of said image carrier redetected by said reference position detecting device and issues the second image writing reference position signal for the next color.

3. (*Original*) An image forming apparatus according to claim 2, comprising:

a reference clock generating device that generates a reference clock signal;

a reference clock counting device that counts time with reference to one period of the reference clock signal as a unit time;

a circumference measuring device that measures the circumference of said image carrier based on a time interval counted by said reference clock counting device based on the reference position detected by said reference position detecting device;

a storage device that stores the circumference measured by said circumference measuring device; and

a line number counting device that counts a number of lines with reference to one period of a laser beam detect signal in a main scanning direction as one line period.

4. (*Original*) An image forming apparatus according to claim 3, wherein the reference clock signal has a period corresponding to a time period less than the one line period.

5. (*Currently Amended*) An image forming apparatus according to claim 3, further comprising a conversion device that converts a count value, which has been counted in units of the reference clock signal by said circumference measuring device, the count value corresponding to the

circumference of said image carrier, into a number of lines, and wherein said storage device stores the number of lines converted by said conversion device.

6. (*Original*) An image forming apparatus according to claim 5, wherein said conversion device converts the count value into the number of lines, by finely adjusting an integer part of a conversion result in accordance with a decimal part of the conversion result, and said storage device stores a value of the integer part finely adjusted by said conversion device.

7. (*Currently Amended*) An image forming apparatus according to claim 3, wherein said storage device stores the number of lines, and said ~~first issuing device~~ controller causes said line number counting device to count the number of lines stored in said storage device and determines issuing timing of the image writing reference position signal for the next color.

8. (*Original*) An image forming apparatus according to claim 3, wherein said line number counting device counts a predetermined number of lines corresponding to a time period from issuing of the image writing reference position signal for a final color to restart of conveying for a recording medium from a recording medium standby position located upstream of a position at which image formation is carried out.

9. (*Currently Amended*) An image forming apparatus ~~according to claim 1, comprising:~~
a rotatively driven image carrier;
a primary transfer device that primarily transfers an image onto said image carrier;
a secondary transfer device that secondarily transfers the image on said image carrier
onto a recording medium; and
a controller,
wherein said controller issues a first image writing reference position signal for starting
image formation based on a circumference that is a length of said image carrier in a direction of
rotation thereof,
wherein said controller issues a second image writing reference position signal for
starting image formation based on a detected reference position on the image carrier,
wherein said controller selectively switches between the first and second image writing
reference position signals,

wherein said selection device controller selects the second image writing reference position signal-issuing-by-said-second-issuing-device when a processing speed at which image formation is carried out is changed during image formation, and selects the first image writing reference signal-issuing-by-said-first-issuing-device when the processing speed is not changed during image formation.

10. (*Original*) An image forming apparatus according to claim 1, wherein the image forming apparatus is an apparatus selected from the group consisting of a copying machine, a printer, and a multifunction apparatus having a combination of functions of a copying machine and a printer.

11. (*Currently Amended*) An image forming control method executed by an image forming apparatus that carries out image formation by primarily transferring an image onto a rotatively driven image carrier and then secondarily transferring the image on the image carrier onto a recording medium, comprising:

a first issuing step of issuing a first image writing reference position signal for starting image formation based on a circumference ~~that is a length which is detected in advance~~ of the image carrier in a direction of rotation;

a second issuing step of issuing ~~the~~ a second image writing reference position signal for starting image formation based on a detected reference position on the image carrier; and

a selection step of selectively switching between ~~signal-issuing-in-said-first-issuing-step-~~ and signal-issuing-in-said second-issuing-step the first and second image writing reference position signals.

12. (*Currently Amended*) An image forming control method ~~according to claim 11,~~ comprising executed by an image forming apparatus that carries out image formation by primarily transferring an image onto a rotatively driven image carrier and then secondarily transferring the image on the image carrier onto a recording medium, the method comprising:

a first issuing step of issuing a first image writing reference position signal for starting image formation based on a circumference that is a length of the image carrier in a direction of rotation;

a second issuing step of issuing a second image writing reference position signal for starting image formation based on a detected reference position on the image carrier;

a selection step of selectively switching between the first and second image writing reference position signals; and

a reference position detecting step of detecting the reference position on the image carrier by detecting a marking attached to the image carrier, and

wherein when image formation is carried out for a plurality of colors, said first issuing step comprises determining image writing timing for a first color and issuing the first image writing reference position signal for the first color, then determining image writing timing for a next color after lapse of a time period corresponding to one rotation of the image carrier later and issuing the first image writing reference position signal for the next color, and

wherein when image formation is carried out for the plurality of colors, said second issuing step comprises determining the image writing timing for the first color with reference to the reference position of the image carrier detected in said reference position detecting step and issuing the second image writing reference position signal for the first color, and then determining the image writing timing for the next color with reference to the reference position of the image carrier redetected in said reference position detecting step and issuing the second image writing reference position signal for the next color.

13. (*Original*) An image forming control method according to claim 12, comprising:

a reference clock generating step of generating a reference clock signal;

a reference clock counting step of counting time with reference to one period of the reference clock signal as a unit time;

a circumference measuring step of measuring the circumference of the image carrier based on a time interval counted in said reference clock counting step based on the reference position detected in said reference position detecting step;

a storage step of storing the circumference measured in said circumference measuring step; and

a line number counting step of counting a number of lines with reference to one period of a laser beam detect signal in a main scanning direction as one line period.

14. (*Original*) An image forming control method according to claim 13, wherein the reference clock signal has a period corresponding to a time period less than the one line period.

15. (*Currently Amended*) An image forming control method according to claim 13, further comprising a conversion step of converting a count value, which has been counted in units of the reference clock signal in said circumference measuring step, the count value corresponding to the circumference of the image carrier, into a number of lines, and wherein said storage step comprises storing the number of lines converted in said conversion step.

16. (*Original*) An image forming control method according to claim 15, wherein said conversion step comprises converting the count value into the number of lines, by finely adjusting an integer part of a conversion result in accordance with a decimal part of the conversion result, and said storage step comprises storing a value of the integer part finely adjusted in said conversion step.

17. (*Original*) An image forming control method according to claim 13, wherein said storage step comprises storing the number of lines, and said first issuing step comprises causing said line number counting step to count the number of lines stored in said storage step and determining issuing timing of the image writing reference position signal for the next color.

18. (*Original*) An image forming control method according to claim 13, wherein said line number counting step comprises counting a predetermined number of lines corresponding to a time period from issuing of the image writing reference position signal for a final color to restart of conveying for a recording medium from a recording medium standby position located upstream of a position at which image formation is carried out.

19. (*Currently Amended*) An image forming control method according to claim 14, executed by an image forming apparatus that carries out image formation by primarily transferring an image onto a rotatively driven image carrier and then secondarily transferring the image on the image carrier onto a recording medium, the method comprising:

a first issuing step of issuing a first image writing reference position signal for starting image formation based on a circumference that is a length of the image carrier in a direction of rotation;

a second issuing step of issuing a second image writing reference position signal for starting image formation based on a detected reference position on the image carrier; and

a selection step of selectively switching between the first and second image writing reference position signals,

wherein said selection step comprises selecting the ~~signal-issuing in said second-issuing-~~
~~step second image writing reference position signal~~ when a processing speed at which image formation is carried out is changed during image formation, and selecting the ~~signal-issuing in-~~
~~said first-issuing step first image writing reference position signal~~ when the processing speed is not changed during image formation.

20. (Original) An image forming control method according to claim 11, wherein the image forming method is executed by an image forming apparatus selected from the group consisting of a copying machine, a printer, and a multifunction apparatus having a combination of functions of a copying machine and a printer.